What is claimed is:

1. An aqueous dispersion with a pH of from 2 to 7, comprising
   (A) at least one swellable polymer or oligomer containing anionic and/or potentially anionic and/or nonionic hydrophilic functional groups,
   (B) surface-modified, cationically stabilized, inorganic nanoparticles of at least one kind,
   (C) at least one compound selected from the group consisting of amphiphiles and organic compounds which are capable of forming chelate ligands, and
   (D) at least one crosslinking agent.

2. The aqueous dispersion of claim 1, wherein the polymers and oligomers (A) are selected from the group consisting of polymers and oligomers which contain anionic and/or potentially anionic functional groups and have at a pH of from 2 to 7 an electrophoretic mobility $\leq$ -0.5 (μm/s)/(V/cm).

3. The aqueous dispersion of claim 1 or 2, wherein the polymers and oligomers (A) contain at least one reactive functional group (S) selected from the group consisting of (S1) reactive functional groups which contain at least one bond which can be activated with actinic radiation and (S2) reactive functional groups which are able to undergo reactions with groups of their own kind ("with themselves") and/or with complementary reactive functional groups (S2).

4. The aqueous dispersion of claim 3, wherein the reactive functional groups (S2) that are complementary to the reactive functional groups (S2) of the polymer and/or oligomer (A) are present in the surface-modified nanoparticles (B), in the amphiphile (C) and/or in the crosslinking agent (D).

5. The aqueous dispersion of any of claims 1 to 4, wherein the inorganic nanoparticles (B) are selected from the group consisting of main group and transition group metals and their compounds.

6. The aqueous dispersion of claim 5, wherein the main group and transition group metals are selected from the metals of main groups three to five, transition groups three to six and also one and two of the periodic system of the elements, and the lanthanides.

7. The aqueous dispersion of claim 6, wherein the metals are selected from the group consisting of boron, aluminum, gallium, silicon, germanium, tin, arsenic, antimony, silver, zinc, titanium, zirconium, hafnium, vanadium, niobium, tantalum, molybdenum, tungsten, and cerium.

8. The aqueous dispersion of any of claims 1 to 7, wherein the nanoparticles (B) are modified with at least one compound of the general formula I:

$$[(S\text{-})_o\text{-}L\text{-}]_mM(R)_n(H)_p \quad (I)$$

in which the indices and variables have the following meanings:

S	is a reactive functional group;
L	is an at least divalent organic linking group;
H	is a hydrolyzable monovalent group or a hydrolyzable atom;
M	is a divalent to hexavalent main group or transition group metal;
R	is a monovalent organic radical;
o	is an integer from 1 to 5;
m+n +p	is an integer from 2 to 6;
p	is an integer from 1 to 6;
m and n	are zero or an integer from 1 to 5.

9. The aqueous dispersion of claim 8, wherein the reactive functional group S is selected from the group consisting of (S1) reactive functional groups which contain at least one bond which can be activated with actinic radiation and (S2) reactive functional groups which undergo reactions with groups of their own kind ("with themselves") and/or with complementary reactive functional groups.

10. The aqueous dispersion of claim 9, wherein the reactive functional groups (S2) that are complementary to the reactive functional groups (S2) of the compounds I are present in the polymer and/or oligomer (A), in the amphiphile (C) and/or in the crosslinking agent (D).

11. The aqueous dispersion of any of claims 1 to 10, wherein the amphiphile (C) is selected from the group consisting of monoalcohols and aliphatic polyols.

12. The aqueous dispersion of claim 11, wherein the monoalcohols (C) are selected from the group consisting of monoalcohols having from 3 to 6 carbon atoms in the molecule and the aliphatic polyols (C) are selected from the group consisting of diols having from 3 to 12 carbon atoms in the molecule.

13. The aqueous dispersion of any of claims 1 to 12, wherein the organic compounds (C) which form chelate ligands are selected from the group consisting of compounds containing at least two functional groups which are able to coordinate with metal atoms or metal ions.

14. The aqueous dispersion of any of claims 1 to 13, wherein the crosslinking agent (D) contains reactive functional groups (S2) which are able to undergo reactions with complementary reactive functional groups (S2) present in the polymer and/or oligomer (A), on the surface-modified nanoparticles (B) and/or in the amphiphile (C).

15. The aqueous dispersion of claim 14, wherein the reactive functional groups (S2) of the crosslinking agents (D) are selected from the group consisting of N-methylol, N-methylol ether, and alkoxycarbonylamino groups.

16. The aqueous dispersion of claim 15, wherein the crosslinking agent (D) is selected from the group consisting of amino resins and tris(alkoxycarbonylamino)triazines.

17. The aqueous dispersion of claim 16, wherein the amino resins are selected from the group of the melamine-formaldehyde resins.

18. The aqueous dispersion of any of claims 2 to 17, wherein the complementary reactive functional groups (S2) of the polymer and/or oligomer (A) and/or of the amphiphile (C) are hydroxyl groups.

19. The aqueous dispersion of any of claims 1 to 18, comprising at least one pigment (E).

20. The aqueous dispersion of claim 19, wherein the pigment (E) is selected from the group consisting of color pigments, optical effect pigments, electrically conductive pigments, magnetic pigments, magnetically shielding pigments, fluorescent pigments, phosphorescent pigments, corrosion inhibitor pigments, and extender pigments, and also pigments which have at least two of these properties.

21. A process for preparing an aqueous dispersion as claimed in any of claims 1 to 20, which comprises dispersing

(B) surface-modified, cationically stabilized, inorganic nanoparticles of at least one kind,

(C) at least one compound selected from the group consisting of amphiphiles and organic compounds which are capable of forming chelate ligands, and

(D) at least one crosslinking agent and also, where appropriate,

(E) at least one pigment

in an aqueous dispersion of at least one swellable polymer or oligomer containing anionic and/or potentially anionic and/or nonionic hydrophilic functional groups, and homogenizing the resulting mixture.

22. The use of the aqueous dispersion of any of claims 1 to 20 and the dispersion produced according to the method of claim 21 for painting or coating motor vehicle bodies and parts thereof, the interior and exterior of motor vehicles, the interior and exterior of buildings, doors, windows, and furniture, in industrial coating for the coating of plastics parts, especially transparent plastics parts, small parts, coils, containers, electrical components, and white goods, and also for the coating of hollow glassware.

23. The use of the aqueous dispersion of any of claims 1 to 20 and the dispersion produced according to the method of claim 21 for producing moldings and self-supporting films.